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RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YASUMICHI KUWAYAMA and TOSHIHIRO MAKI

Appeal 2008-000060
Application 10/775,203
Technology Center 2800

Oral Hearing Held: July 7, 2009

Before JOSEPH F. RUGGIERO, ROBERT E. NAPPI, and THOMAS S. HAHN, Administrative Patent Judges

ON BEHALF OF THE APPELLANTS:

BLAKE TANKERSLEY, ESQ.
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The above-entitled matter came on for hearing on Tuesday, July 7, 2009, commencing at 9:00 a.m., at The U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia, before Victor Lindsay, Notary Public.

1 MS. BEAN: Calendar no. 6, Mr. Tankersley.

2 MR. TANKERSLEY: Hello. My name is Blake Tankersley, and I --

3 JUDGE RUGGIERO: Do you want to spell your name for the --

4 MR. TANKERSLEY: My name is Blake Tankersley,

5 B-l-a-k-e, T-a-n-k-e-r-s-l-e-y, and I am presenting the oral hearing for

6 Application No. 10/775,203. I would like to thank the Board for allowing

7 me to present this case before them.

8 First, I'm going to discuss the claimed invention of the present

9 application. Then I'm going to discuss the Examiner's rejections and how

10 the independent claims 1 and 5 of the present application overcome the

11 Examiner's rejections.

12 The invention of the present application generally relates to our

13 waterproofing structure for connecting a terminal to a wire. As can be seen,

14 for example, in figures 1 through 4, and I'm specifically referring to figure 1

15 now, the wire comprises conductive portion 3 in the insulating sheath 4.

16 Both the conductive portion 3 and the insulating sheath 4 are inserted into

17 the terminal 1. Then, the wire connection portion of the terminal 1 is

18 pressed radially uniformly, over an entire periphery of the wire connection

19 and over an entire length of the wire connection. The structure resulting

20 from this is shown, for example, in figures 3 and 4 of the specification.

21 By pressing the wire connection portion radially uniformly over an

22 entire periphery and entire length, the conductive portion 3 is held intimately

23 in contact with the terminal 1. This provides excellent conductivity between

24 the terminal 1 and the conductive portion 3.

1 Furthermore, since the insulating sheath 4 is also inserted into the
2 terminal 1, the insulating sheath is also held intimately in contact with the
3 terminal 1.

4 Furthermore, since the insulating sheath has an elastic -- is made of an
5 elastic material, the insulating sheath provides a rebound elastic force onto
6 the terminal 1. This is shown in figure 4 by the arrows represented by the
7 reference "f." Since this elastic force is provided on the terminal, there is no
8 gap formed between the insulating sheath 4, and the terminal 1. And
9 therefore water is unable to penetrate into the inside portions of the terminal,
10 thus waterproofing the connection.

11 Now, the Examiner rejects independent claims 1 and 5 under 35
12 U.S.C. 103(a) over Japanese publication no. 7161392, to Kobayashi. And,
13 also, in view of U.S. publication no. 2001/16459 A1, to Livshiz. It is
14 unclear exactly which reference the Examiner is relying on for certain
15 portions of -- certain elements of the claims 1 and 5. However, it does not
16 matter which reference the Examiner is relying on, because neither Livshiz
17 or Kobayashi discloses the wire connection portion being pressed radially
18 uniformly over an entire periphery of the wire connection portion and over
19 an entire length of the wire connection portion.

20 Starting with Kobayashi, Kobayashi at figure 1-B, shows the terminal
21 being pressed against the wire. However, figure 1-B of Kobayashi is only a
22 2-D representation of the device in Kobayashi. Therefore, figure 1-B only
23 shows the terminal being pressed from the upwards region of the terminal
24 and from a downwards region of the terminal. Therefore, it does not show
25 that it's being pushed by the sides. And therefore, figure 1-B of Kobayashi

1 does not disclose the wire connection portion being pressed uniformly over
2 an entire periphery.

3 Further, in paragraph 11 of Kobayashi, it only states that it is pressed
4 using an hydraulic press. A normal hydraulic press only presses from a top
5 and a bottom, and does not necessarily press uniformly over an entire
6 periphery.

7 JUDGE HAHN: Excuse me.

8 MR. TANKERSLEY: At this point, I'd like to
9 briefly --

10 JUDGE RUGGIERO: Wait a minute. There's a question.

11 MR. TANKERSLEY: I'm sorry.

12 JUDGE HAHN: Excuse me. On the hydraulic press, do you have
13 any evidence in the record related to that statement that you made?

14 MR. TANKERSLEY: No, we do not.

15 JUDGE HAHN: Okay.

16 MR. TANKERSLEY: However, it does not -- Kobayashi does not
17 explain any specific type of hydraulic press, and therefore does not say that
18 it's using a specific hydraulic press that is able to press uniformly over an
19 entire periphery.

20 Further, the Examiner, in the Examiner's Answer, cites for the first
21 time to U.S. patent no. 5,307,678, to Cost. The Examiner seems to be
22 alleging that the Kobayashi reference is using the hydraulic crimper of Cost.
23 However, Kobayashi, as said before, only discloses a hydraulic press,
24 without giving any more detail. Therefore, Kobayashi does not disclose
25 using the hydraulic crimper of Cost.

1 Furthermore, we submit that Cost is not relevant to this proceeding.
2 Specifically, Cost has not been made of record, and if the Examiner wishes
3 to use Cost in a rejection, we respectfully request the Examiner to reopen
4 prosecution.

5 JUDGE NAPPI: Sounds like to me the Examiner is using Cost to
6 support his assertion that hydraulic could be peripheral, which is in response
7 to your argument that hydraulic has to be one-sided, so he has provided
8 evidence on one side or the other. It sounds like it doesn't really relate. He's
9 relying on Kobayashi for the radial pressure, isn't he?

10 MR. TANKERSLEY: That's the way I interpret it. Respectfully --

11 JUDGE NAPPI: So what does it matter? What does it matter for the
12 purposes of our deciding an appeal whether or not Cost is --

13 MR. TANKERSLEY: I say that Cost is completely irrelevant to this
14 hearing.

15 JUDGE NAPPI: Except to rebut your argument that hydraulic is one-
16 sided.

17 MR. TANKERSLEY: I think that the Examiner has mischaracterized
18 our argument. What we are saying is that Kobayashi does not disclose that
19 the hydraulic press in Kobayashi uniformly presses over an entire periphery.
20 We're not --

21 JUDGE NAPPI: But you just said that --

22 MR. TANKERSLEY: We do not argue that no hydraulic presses do
23 this. We're arguing that Kobayashi does not disclose that it does this. So I
24 think the Examiner has mischaracterized our argument by saying that we are
25 saying that no hydraulic press is able to do this.

1 Furthermore, we believe that the Cost is irrelevant to the present
2 claimed invention and Kobayashi because, for example, in Cost, only a very
3 small portion shown in figure 2 by reference no. 40 --

4 JUDGE NAPPI: I thought you just said Cost was irrelevant to this.

5 MR. TANKERSLEY: Just in case, I'd like to --

6 JUDGE NAPPI: So why are we still discussing Cost?

7 MR. TANKERSLEY: We don't have to discuss Cost any further. I
8 just thought just in case you wanted to raise a grounds of rejection, I would
9 like to say why I think that's not proper -- or not -- what we say against that.

10 So, just real quickly, we believe that the Cost only presses over a very
11 short portion of 40, instead of over the entire length, and therefore is
12 irrelevant to the present claimed invention in Kobayashi.

13 Furthermore, the Examiner seems to rely on Livshiz. However,
14 Livshiz also does not disclose a wire connection portion being pressed
15 radially uniformly over an entire periphery of the wire connection portion or
16 over an entire length of the wire connection portion.

17 Livshiz works by applying a magnetic pulse to a
18 work-piece to deform the work-piece. Looking at figure 6 of Livshiz, the
19 work-piece 52 is inserted into the hole 50 of the magnetic coil 46 of the
20 device in Livshiz. Then, an electric pulse is provided to the magnetic coil
21 46, and the magnetic coil 46 applies a magnetic repulsive force to the work-
22 piece 52 of Livshiz.

23 However, as can be seen in figure 6, the magnetic coil of Livshiz is
24 formed in a general U-shape. Therefore, there is a gap between the ends of
25 the U. And because of this gap, either there is no magnetic repulsive force
26 applied to the portion of the work-piece corresponding to the gap, or there is

1 less magnetic force applied to the portion of the work-piece corresponding to
2 this gap. Therefore, Livshiz does not disclose the wire connection portion as
3 pressed radially uniformly over an entire periphery.

4 Now, also in the Examiner's Answer, the Examiner alleges that this
5 magnetic pulse will close the gap in Livshiz. However, the Examiner does
6 not cite anywhere, to any support for this allegation.

7 Furthermore, the Examiner seems to be misunderstanding how the
8 device in Livshiz works. Specifically, the device -- as shown in paragraph 3
9 of Livshiz, the device works by applying a magnetic repulsive force to the
10 work-piece 52. Because the magnetic coil 46 does not move, it is able to
11 deform the work-piece 52. Therefore, the gap stays the same in Livshiz and
12 does not close. Furthermore --

13 JUDGE HAHN: Could you point out in Livshiz where it says that the
14 coil does not move?

15 MR. TANKERSLEY: Yes. On paragraph 3, it says, "The resulting
16 eddy currents that are induced in the work-piece shield magnetic repulsion
17 between the work-piece and the forming coil, and since the forming coil is
18 firmly supported in its position." So that's the portion that I'm relying on for
19 saying that it does not move.

20 JUDGE HAHN: The "firmly supported"?

21 MR. TANKERSLEY: In its position.

22 JUDGE HAHN: I see. Okay.

23 MR. TANKERSLEY: Furthermore, if the coil was to move, since this
24 is a repulsive force, it would force the ends of the U part, instead of together,
25 and therefore, the gap would be increased, rather than closed.

1 JUDGE HAHN: Could you cite why the ends would be separated, as
2 opposed to being brought together?

3 MR. TANKERSLEY: Yes, because, as saying that -- in paragraph --
4 in paragraph 3, it says that it yields a magnetic repulsion. This is what's
5 used to deform the work piece in Livshiz. Because of this magnetic
6 repulsion, there's a force between the work piece and the coil in Livshiz that
7 -- so, here's, let's say, one end of the coil and one end of the work piece.
8 There's this repulsive force that's forcing outward to deform the work piece
9 52. Since this does not move, this force here causes the magnetic work
10 piece to deform. However, if magnetic coil were to move, since the force is
11 going this way, the magnetic coil would move away from the
12 work-piece.

13 Looking at the diagram in figure 6, it can be seen that if the device
14 moves away from the work-piece, it is known to open up the gap, rather than
15 close it.

16 JUDGE HAHN: Under this approach then, what -- how would the
17 piece 52 be brought into contact with the conductor?

18 MR. TANKERSLEY: Piece 52 does not seem to be brought -- oh,
19 which conductor are you talking about?

20 JUDGE HAHN: I'm talking -- well, if I look at figure 6, there is
21 conductor 54. But if I look at the series of figures 1 through 5, the bottom
22 figure 5 shows that the conductors are evenly compressed because of the
23 constriction of the wall 24.

24 MR. TANKERSLEY: Right. The work piece is compressed.
25 However, it cannot be uniformly compressed because the device in Livshiz
26 is not capable of performing that function.

1 JUDGE HAHN: And it's not capable of performing that function
2 because --

3 MR. TANKERSLEY: -- of the gap.

4 JUDGE HAHN: Which when the magnetic field is applied is opened
5 up, by your interpretation?

6 MR. TANKERSLEY: It is either maintained or opened up.

7 JUDGE HAHN: Understood.

8 JUDGE RUGGIERO: Counsel, you seem to use the numeral 2 to
9 refer to the gap. I couldn't find a numeral 2. Is that --

10 MR. TANKERSLEY: I think that was a typographical error. There is
11 no numeral 2.

12 JUDGE RUGGIERO: Okay.

13 JUDGE HAHN: Now, in the context of all of this, I'd like to direct
14 your attention to paragraph 85 of Livshiz,
15 and if you could address your argument with respect to this last sentence,
16 which states "A strong current is rapidly discharged through coil 56, and the
17 pulsed magnetic field which arises in consequence thereto brings to
18 constriction the walls of the cylindrical portion 55 unto the end of cable 54,
19 whereby the two become firmly joined to one another." That seems to
20 address the consequence that's reflected in figure 5.

21 MR. TANKERSLEY: In figure -- okay, in figure 5. It is constricted,
22 however, this device is not directed towards waterproofing. It is just
23 directed towards providing an electrical connection between the terminal and
24 the wires.

25 We submit that because of this gap, there is going to be a portion
26 which does -- is not uniformly constricted on there, and therefore that could

1 cause a problem with a gap being made between the wire and the terminal,
2 which would allow water to penetrate through.

3 Are there -- so, as discussed, neither Livshiz or Kobayashi discloses
4 the wire connection portion being pressed radially uniformly over an entire
5 periphery of the wire connection portion, or over an entire length of the wire
6 connection portion.

7 Are there any other questions? No?

8 JUDGE RUGGIERO: No. Thank you.

9 MR. TANKERSLEY: Thank you very much.

10 (Whereupon, the hearing concluded on July 7, 2009)